



Loudoun County Fire and Rescue System Guideline

Subject: Fire and Rescue Capital Facilities Intensity Factors	Approved: 29 June 2004 Revised: 31 August 2004
Chapter: Administration	FRG: 7.2
Approved: _____, Fire and Rescue Commission _____ , Dept. of Fire and Rescue Services _____ , Operational Medical Director	

Purpose: To establish baseline fire and rescue capital intensity factors for use in Loudoun County planning processes.

Guideline:

1. One fire and rescue station is required for every 10,000 residents or TBD square-feet of commercial space in Loudoun County. A station includes a five-acre site appropriate for construction of a 10 to 12,000 square-foot fire and rescue station and supporting station equipment and infrastructure.

2. One 1500-gpm engine is required for every 10,000 residents / occupants.

3. One Advanced Life Support (ALS) ambulance is required for every 5,000 residents / occupants.

4. One ladder truck with equipment is required for every 30,000 residents / occupants.

5. One heavy rescue squad with equipment is required for every 50,000 residents / occupants.

6. The following FY05 construction and apparatus estimates shall be used to evaluate capital facilities costs:

a.	Basic station construction costs	\$5.46M
b.	One engine with equipment	\$0.35M
c.	One advanced life support ambulance with equipment	\$0.25M
d.	One ladder truck with equipment	\$0.80M
e.	One heavy squad with equipment	\$0.40M

The resulting capital facilities cost per resident / occupant is \$665 (FY05).

7. The resulting capital facilities impact has been determined as follows for various occupancy types (FY05):

a.	Residential	3 occupants / RU	\$1,995 / RU
b.	Commercial (office)	1 occupant / 300 SF	\$2.22 / SF
c.	Commercial (retail)	1 occupant / 400 SF	\$1.66 / SF
d.	Industrial	1 occupant / 600 SF	\$1.11 / SF
e.	Institutional	1 occupant / 250 SF	\$2.66 / SF

8. Projects containing special public safety risks, such as large assemblies, shopping malls, hazardous chemicals or circumstances, require assessment by the Department of Fire and Rescue and the affected fire and/or rescue squads in order to determine the appropriate mitigation strategy.